

**CLAIMS**

1. An optical fibre unit comprising a sheath and a plurality of optical fibre elements loosely housed in said sheath, said sheath having a coating of adherence reducing material particles and a radial thickness not substantially greater than 0.3 mm.  
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2. An optical fibre unit as claimed in claim 1, wherein said sheath has a radial thickness substantially not greater than 0.2 mm.
- 10 3. An optical fibre unit as claimed in claim 2, wherein said sheath has a radial thickness substantially in the range of 0.05 to 1.5 mm.
4. An optical fibre unit as claimed in claim 1, 2 or 3, wherein said adherence reducing material is graphite.
- 15 5. An optical fibre unit as claimed in any one of the preceding claims, wherein said sheath is made of a low smoke zero halogen material.
6. An optical fibre unit as claimed in any one of the preceding claims, wherein said particles have a nominal diameter not substantially greater than 8 microns.  
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7. An optical fibre unit as claimed in claim 6, wherein said particles have a mean nominal diameter not substantially greater than 2 microns.

8. An optical fibre unit as claimed in any one of the preceding claims, wherein said sheath has twelve optical fibre elements loosely housed therein.

9. An optical fibre unit as claimed in any one of the preceding claims, wherein said sheath has a nominal outside diameter of 1.3 mm.

10. An optical fibre element as claimed in any one of claims 1 to 8, wherein said sheath has a nominal inside diameter of 1.1 mm.

11. A method of coating an optical fibre unit that comprises a polymeric sheath and a plurality of optical fibre elements loosely housed in said sheath, said method comprising applying a liquid coating comprising a dispersion of adherence reducing material particles to said sheath and applying heat to the optical fibre unit to produce a dry coating of said particles on said sheath.

12. A method as claimed in claim 11, wherein said liquid coating is applied to the polymeric sheath at room temperature.

13. A method as claimed in claim 11 or 12, wherein said liquid coating comprises graphite particles and water.

14. A method as claimed in claim 13, wherein said heat applied to said optical fibre unit evaporates the water content of said liquid coating.

15. A method as claimed in any one of claims 11 to 14, wherein said particles have a nominal diameter not substantially greater than 8 microns.

16. A method as claimed in claim 15, wherein said particles have a mean nominal  
5 diameter not substantially greater than 2 microns.

17. A method as claimed in any one of claims 11 to 16, wherein said heat is applied such that the temperature of said sheath does not exceed the softening temperature of the polymeric material forming said sheath.

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18. A method as in claimed in claim 17, wherein the temperature of said sheath is at least 10°C lower than the softening temperature of the polymeric material.

19. A method as claimed in any one of claims 11 to 18, wherein said heat applying  
15 step comprises passing the optical fibre unit through a plurality of drying chambers.

20. A method as claimed in claim 19, wherein as the optical fibre unit passes through each said drying chamber, substantially the same amount of heat is applied to the optical fibre unit.

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21. A method as claimed in claim 19 or 20, wherein said optical fibre unit passes more than once through at least one of said drying chambers.

22. A method as claimed in claim 19, 20 or 21, wherein the direction of movement of the optical fibre unit is different when passing through one of said drying chambers to the direction of movement when passing through one or more of the other drying chambers.

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23. A method as claimed in any one of claims 19 to 22, wherein said drying chambers each have a length, said length being not substantially greater than 0.35 mm and preferably approximately 0.31 mm.

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24. A method as claimed in any one of claims 11 to 23, further comprising using a surfactant to assist in the application of said liquid coating to said sheath.

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25. A method as claimed in any one of claims 11 to 24, wherein said liquid coating is applied to said sheath by passing said optical fibre unit through a vessel containing said liquid coating.

26. A method as claimed in claim 25 when dependent on claim 24, wherein said surfactant is contained in said vessel.

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27. A method as claimed in any one of claims 11 to 26, wherein said optical fibre unit moves substantially continuously at a speed of approximately 40m/min during said liquid coating and heat applying steps.

28. An installation comprising a conduit and at least one optical fibre unit as claimed in any one of claims 1 to 10 or manufactured according to the method of any one of claims 11 to 27, the or each said optical fibre having been installed in said conduit by blowing the optical fibre unit along said conduit.

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29. An optical fibre unit for blown fibre installation, said optical fibre unit comprising a sheath and a plurality of optical fibre elements loosely housed in said sheath, said sheath having an outer surface coated with adherence reducing material particles and a radial thickness not substantially greater than 0.3 mm.

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30. A method of coating an optical fibre unit for blown fibre installation that comprises a polymeric sheath and a plurality of optical fibre elements loosely housed in said sheath, which sheath has a radial thickness not substantially greater than 0.3 mm, said method comprising applying a liquid coating comprising a dispersion of adherence reducing material particles to an outer surface of said sheath and applying heat to the optical fibre unit to produce a dry coating of said particles on said sheath.

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31. An optical fibre unit for blown fibre installation, said optical fibre unit comprising:

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a sheath defined by a generally tubular wall, said wall having a radially outermost surface and a radially innermost surface and a radial thickness not substantially greater than 0.3 mm;

a plurality of optical fibres loosely housed in said sheath; and

a coating adhered to said radially outermost surface of said wall, said coating comprising adherence reducing particles.

32. A method of coating an optical fibre unit for blown fibre installation, said method comprising the steps of:

forming a sheath around a plurality of optical fibre elements such that said optical fibre elements are loosely housed by the sheath, said sheath comprising a generally tubular wall having a radially outer surface and a radially inner surface and a radial thickness not substantially greater than 0.3 mm;

applying a liquid coating comprising a dispersion of adherence reducing particles to said radially outer surface; and

passing the optical fibre unit through a heated environment to dry said liquid coating to provide a coating of said adherence reducing particles adhering to said radially outer surface.